Program of Conference

The 4th MSJ-SI international conference
"NONLINEAR DYNAMICS IN PARTIAL DIFFERENTIAL EQUATIONS",
Kyushu University, Kyushu, Japan,
September 12th - 21st, 2011.

– PROGRAM –

Overview

	9:50~	10:00~12:00	13:30~14:30	15:00~	17:30~
11(Sun)					Reception (I) (16:00~)
12(Mon)	Opening	H.Matano (I)	K.Ishige T.Ohta	Organized Sessions (A), (B)	
13(Tue)		H.Matano (II)	A.Stevens C.-N.Chen	Organized Sessions (C), (D)	
14(Wed)		N.Fusco	K.Promislow A.Figalli	Contributed Talks (A), (B)	Banquet (I) (19:00~)
15(Thu)		R.L.Pego (I)	S.Koike J.Wei	Organized Sessions (E), (F)	Contributed Talks (C), (D)
16(Fri)		R.L.Pego (II)	Excursion		
17(Sat)					Reception (II) (16:00~)
18(Sun)		E.Feireisl (I)	S.Jiang R.Ikehata	Organized Sessions (G), (H)	
19(Mon)		E.Feireisl (II)	T.Yanagisawa N.Hayashi	Organized Sessions (I), (J)	
20(Tue)		J.E. Muñoz Rivera (I)	S.Nishibata K.Nishihara	Contributed Talks (E), (F)	Banquet (II) (19:00~)
21(Wed)		T.Yang, T.Iguchi K.Nakanishi, J.Segata	Contributed Talks (G), (H)	J.E. Muñoz Rivera (II) (15:00~17:00)	

Plenary Lectures (at Main Hall)

12 (Mon) 10:00 ~ 12:00, 13 (Tue) 10:00 ~ 12:00
Hiroshi Matano (*University of Tokyo*)
Front propagation in spatially heterogeneous media

14 (Wed) 10:00 ~ 12:00
Nicola Fusco (*University of Napoli*)
A second variation approach to free discontinuity variational problems

15 (Thu) 10:00 ~ 12:00, 16 (Fri) 10:00 ~ 12:00
Robert L. Pego (*Carnegie Mellon University*)
Nonlinear dynamics of aggregation and waves

18 (Sun) 10:00 ~ 12:00, 19 (Mon) 10:00 ~ 12:00
Eduard Feireisl
(*Institute of Mathematics of the Academy of Sciences*)
Asymptotic analysis of compressible viscous fluids

20 (Tue) 10:00 ~ 12:00, 21 (Wed) 15:00 ~ 17:00
Jaime E. Muñoz Rivera
(*National Laboratory for Scientific Computation*)
Stability result to dissipative semigroups and applications

Invited Talks

12 (Mon) 13:30 ~ 14:30

(Hall 1) Kazuhiro Ishige (*Tohoku University*)
L^p norms of nonnegative Schrödinger heat semigroup and the large time behavior of hot spots

(Hall 2) Takao Ohta (*Kyoto University*)
Self-propelled dynamics of deformable domain in excitable reaction diffusion systems

13 (Tue) 13:30 ~ 14:30

(Hall 1) Angela Stevens (*University of Münster*)
Mathematical Models of Cellular Aggregation due to Local Interaction

(Hall 2) Chao-Nien Chen (*National Changhua University of Education*)
Some recent progress on standing waves in FitzHugh–Nagumo type reaction-diffusion systems

14 (Wed) 13:30 ~ 14:30

(Hall 1) Keith Promislow (*Michigan State University*)
Geometric Evolution of Structured Interfaces

(Hall 2) Alessio Figalli (*The University of Texas at Austin*)
Regularity for the parabolic obstacle problem with fractional Laplacian

15 (Thu) 13:30 ~ 14:30

(Hall 1) Shigeaki Koike (*Saitama University*)
On the ABP maximum principle for L^p-viscosity solutions of fully nonlinear PDE

(Hall 2) Juncheng Wei (*Chinese University of Hong Kong*)
Traveling waves with multiple and non-convex fronts for a bistable semilinear parabolic equation

18 (Sun) 13:30 ~ 14:30

(Hall 1) Song Jiang
(*Institute of Applied Physics and Computational Mathematics*)
Existence of weak solutions to the three-dimensional steady compressible Navier–Stokes equations

(Hall 2) Ryo Ikehata (*Hiroshima University*)
Energy decay for wave equations with damping terms decaying critically near infinity

19 (Mon) 13:30 ~ 14:30

(Hall 1) Taku Yanagisawa (*Nara Women's University*)
Applications of Hodge decomposition to mathematical fluid dynamics

(Hall 2) Nakao Hayashi (*Osaka University*)
Bilinear Estimates and Nonlinear Klein–Gordon Equations

20 (Tue) 13:30 ~ 14:30

(Hall 1) Shinya Nishibata (*Tokyo Institute of Technology*)
Mathematical analysis on semiconductor equations: model hierarchy and asymptotic behavior

(Hall 2) Kenji Nishihara (*Waseda University*)
Diffusion phenomenon of solutions to the Cauchy problem for the damped wave equation

21 (Wed) 10:00 ∼ 11:00

(Hall 1) Tong Yang (*City University of Hong Kong*)
Well-posedness and qualitative properties for Boltzmann equation without angular cutoff

(Hall 2) Kenji Nakanishi (*Kyoto University*)
Global dynamics above the ground state energy for nonlinear dispersive equations

21 (Wed) 11:00 ∼ 12:00

(Hall 1) Tatsuo Iguchi (*Keio University*)
Shallow water approximations for water waves over a moving bottom

(Hall 2) Jun-ichi Segata (*Tohoku University*)
Long time behavior of solutions to non-linear Schrödinger equations with higher order dispersion

Organized Sessions

(A) Diffusion phenomena and the related topics for maximum points and singularities

12 (Mon), Hall 1

15:00∼15:40 Yasuhito Miyamoto (*Tokyo Institute of Technology*)
Stable patterns and solutions with Morse index one

15:50∼16:30 Futoshi Takahashi (*Osaka City University*)
Blow up points and the Morse indices of solutions to the Liouville equation in two-dimension

16:40∼17:20 Shigeru Sakaguchi (*Hiroshima University*)
Stationary level surfaces and Liouville-type theorems

(B) Variational problems and related topics

12 (Mon), Hall 2

15:00∼15:30 Nicola Gigli (*University of Nice*)
Optimal transport maps on spaces with Ricci curvature bounded from below

15:35∼16:05 Goro Akagi (*Kobe University*)
Stability analysis of asymptotic profiles of solutions for fast diffusion equations

16:20∼16:50 Shinya Okabe (*Tohoku University*)
The gradient flow for the modified one-dimensional Willmore functional defined on planar curves with infinite length

16:55~17:25 Hidemitsu Wadade (*Waseda University*)
On the existence of a positive solution for the elliptic equation involving the multiple Hardy–Sobolev critical terms on the boundary

17:30~18:00 Michinori Ishiwata (*Fukushima University*)
The existence and the nonexistence of maximizing functions for the variational problems associated with Trudinger–Moser type inequalities in the whole domain

(C) Reaction-Diffusion equations and pattern formations

13 (Tue), Hall 1

15:00~15:40 Peter van Heijster (*Boston University*)
Planar traveling structures in a three-component FitzHugh–Nagumo system

15:50~16:30 Ken-Ichi Nakamura (*Kanazawa University*)
Existence of recurrent traveling waves in a two-dimensional undulating cylinder: the virtual pinning case

16:50~17:30 Yoshihito Oshita (*Okayama University*)
Coarsening, stabilization and migration in micro phase separation

17:40~18:20 Kunimochi Sakamoto (*Hiroshima University*)
Pattern Formation Caused by Boundary Interactions in a System of Diffusion Equations

(D) Dynamical systems of differential equations

13 (Tue), Hall 2

15:00~15:40 Jan Bouwe van den Berg (*VU University Amsterdam*)
Braids in dynamics

15:50~16:30 Kazuyuki Yagasaki (*Niigata University*)
Analytic and algebraic conditions for bifurcations of homoclinic orbits in reversible systems

16:40~17:20 Mitsuru Shibayama (*Osaka University*)
Variational approach to the n-body problem

(E) Viscosity solution, theory and application

15 (Thu), Hall 1

15:00~15:50 Andrea Davini (*University of Roma "La Sapienza"*)
Weak KAM Theory topics for stationary ergodic Hamiltonians

16:10~17:00 Hiroyoshi Mitake (*Hiroshima University*)
Large-time Asymptotics for Hamilton–Jacobi Equations with Noncoercive Hamiltonians appearing in Crystal Growth

(F) Numerical analysis for pattern formation problems

15 (Thu), Hall 2

15:00~15:40 Hideki Murakawa (*Kyushu University*)
Numerical solution of nonlinear cross-diffusion systems by a linear scheme

15:40~16:20 Norikazu Saito (*The University of Tokyo*)
L^1 analysis of the finite volume method for degenerate diffusion problems

16:20~17:00 Shigetoshi Yazaki (*University of Miyazaki*)
Moving boundaries with a curvature adjusted tangential velocity

(G) Topics on dispersive equations : Part I

18 (Sun), Hall 1

15:00~16:00 Shu-Ming Sun (*Virginia Tech*)
Existence and stability of capillary-gravity water waves

16:10~17:10 Scipio Cuccagna (*University of Trieste*)
The Hamiltonian structure of the nonlinear Schrödinger equation and the asymptotic stability of its ground states

17:20~18:00 Satoshi Masaki (*Gakushuin University*)
On nonlinear Schrödinger equation with a growing nonlocal interaction

(H) Nonlinear wave equations

18 (Sun), Hall 2

15:00~15:30 Borislav Yordanov (*University of Tennessee–Knoxville*)
On the Asymptotic Behavior of Strongly Damped Wave Equations

15:35~16:05 Yoshihiro Ueda (*Kobe University*)
Large time behavior of solutions to symmetric hyperbolic systems with non-symmetric relaxation

16:10~16:40 Makoto Nakamura (*Tohoku University*)
On the solutions for nonlinear wave equations with localized dissipations in exterior domains

16:55~17:25 Jens Wirth (*University of Stuttgart*)
On the large-time asymptotic behaviour for some wave models

17:30~18:00 Hideaki Sunagawa (*Osaka University*)
On quadratic nonlinear Klein–Gordon systems in two space dimensions

18:05~18:35 Hideo Kubo (*Tohoku University*)
On the exterior problem for nonlinear wave equations

(I) Topics on dispersive equations : Part II

19 (Mon), Hall 1

15:00~16:00 Tomoyuki Kakehi (*Okayama University*)
Fundamental solution to the Schrödinger equation on certain compact symmetric spaces

16:10~17:10 Mitsuru Sugimoto (*Nagoya University*)
A vector fields approach to smoothing and decaying estimates for equations in anisotropic media

17:20~18:00 Kenichi Ito (*University of Tsukuba*)
Spectral and scattering theory on manifolds with ends

(J) Equations in fluid dynamics

19 (Mon), Hall 2

15:00~15:30 Jae Ryong Kweon (*POSTECH*)
Existence and regularity of compressible Navier–Stokes equations on bounded domains with corners

15:35~16:05 Senjo Shimizu (*Shizuoka University*)
Loss of control of motions from initial data for pending capillary liquid

16:10~16:40 Yasushi Taniuchi (*Shinshu University*)
Uniqueness of almost periodic-in-time solutions to Navier–Stokes equations in unbounded domains

16:55~17:25 Shu Wang (*Beijing University of Technology*)
Asymptotic limits of compressible Euler–Maxwell equations for plasmas

17:30~18:00 Renjun Duan (*Chinese University of Hong Kong*)
Dissipative structure of the coupled kinetic-fluid models

18:05~18:35 Yasunori Maekawa (*Kobe University*)
On spectral property of the linearization at self-similar solutions for parabolic systems modeling chemotaxis

Contributed Talks

Session (A), 14 (Wed), Hall 1

15:00~15:15 Thomas Bellsky (*Arizona State University*)
Adiabatic Stability for a Generalized Reaction-Diffusion System

15:15~15:30 Yukio Kan-on (*Ehime University*)
On the bifurcation structure of radially symmetric positive stationary solutions for a competition-diffusion system

15:30~15:45 Harunori Monobe (*Tohoku University*)
Behavior of solutions for a free boundary problem describingamoeba motion

15:45~16:00 Kei Nishi (*Hokkaido University*)
Behaviors of a front-back pulse in some bistable reaction-diffusion system with heterogeneity

16:15~16:30 Takashi Okuda (*Kwansei Gakuin University*)
Dynamics of a reaction-diffusion system around a triply degenerate point

16:30~16:45 Masakazu Yamamoto (*Tohoku University*)
Large-time behavior of solutions to the drift-diffusion equation

16:45~17:00 Masaki Kurokiba (*Muroran Institute of Technology*)
On a eliptic-parabolic system describing chemotactic aggregation of two particle in R^2

17:00~17:15 Yukihiro Seki (*Instituto de Ciencias Matemáticas*)
On blow-up of solutions of the 2D Keller–Segel system

17:30∼17:45 Yohei Fujishima (*Tohoku University*)
Blow-up set for a semilinear heat equation with exponential nonlinearity

17:45∼18:00 Yūki Naito (*Ehime University*)
Blow-up criteria and self-similarity for semilinear heat equations

Session (B), 14 (Wed), Hall 2

15:00∼15:15 Yoshihiro Sawano (*Kyoto University*)
Besov–Morrey spaces and Triebel–Lizorkin–Morrey spaces on domains

15:15∼15:30 Soonsik Kwon (*KAIST*)
Poincare–Dulac normal form reduction for unconditional well-posedness of the periodic cubic NLS

15:30∼15:45 Daniele Garrisi (*POSTECH*)
Orbitally stable coupled standing waves for a coupled non-linear Klein–Gordon equation

15:45∼16:00 Weiwei Ao (*Chinese University of Hong Kong*)
Finite-energy sign-changing solutions without symmetry for the stationary nonlinear Schrödinger equation

16:15∼16:30 Jan Březina (*Kyushu University*)
On the stability of time-periodic parallel flows to the compressible Navier–Stokes equations

16:30∼16:45 Priyanjana M.N. Dharmawardane (*Kyushu University*)
Decay estimates of solutions for nonlinear viscoelastic systems

16:45∼17:00 Ting-Hui Yang (*Tamkang University*)
Traveling Wave Solutions for Time-Delayed Lattice Reaction-Diffusion Systems

17:00∼17:15 Masaya Maeda (*Tohoku University*)
Construction of blow up solutions for Zakharov system on $\mathbb{T}^2$

17:15∼17:30 Octavio Paulo Vera Villagran (*Universidad del Bío-Bío*)
Stabilization in porous thermoviscoelastic mixture

Session (C), 15 (Thu), Hall 1

17:30∼17:45 Yan-Hsiou Cheng (*National Tsing Hua University*)
The Tikhonov regularization method on inverse nodal problems

17:45~18:00 Toru Kan (*Tohoku University*)
Imperfect bifurcation for the Liouville–Gel'fand equation on a perturbed annulus

18:00~18:15 Wulin Weng (*Kyushu University*)
Limit cycle and the walking model

Session (D), 15 (Thu), Hall 2

17:30~17:45 Elliott Ginder (*Kanazawa University*)
On a variational method for multiphase volume-constrained mean curvature flow

17:45~18:00 Kazushige Nakagawa (*Tohoku University*)
On the Phragmén–Lindelöf theorem for L^p-viscosity solutions

18:00~18:15 Masashi Ohnawa (*Tokyo Institute of Technology*)
Asymptotic stability of boundary layers to the Euler–Poisson equation arising in plasma physics

Session (E), 20 (Tue), Hall 1

15:00~15:15 Takayuki Kubo (*University of Tsukuba*)
Weighted estimate of Stokes semigroup in unbounded domains

15:15~15:30 Yasunori Maekawa (*Kobe University*)
On vorticity concentration at the zero viscosity limit for the Navier–Stokes flows in the half plane

15:30~15:45 Naoto Nakano (*Hokkaido University*)
On a steady solution and its linear stability of simple shear flows of a continuum model with density gradient-dependent stress

15:45~16:00 Takahiro Okabe (*Tohoku University*)
Lower bound of L^2 decay of the Navier–Stokes flow in the half space $\mathbb{R}^n_+$

16:15~16:30 Ondrej Kreml
(*Academy of Sciences of the Czech Republic*)
Steady compressible Navier–Stokes–Fourier system with radiation

16:30~16:45 Fucai Li (*Nanjing University*)
The low Mach number limit of compressible MHD equations

16:45∼17:00 Morimichi Umehara (*Ibaraki University*)
Global existence of the spherically symmetric flow of a self-gravitating viscous gas

17:00∼17:15 Natsumi Yoshida (*Osaka University*)
Asymptotics toward a multi-wave pattern for solutions of scalar viscous conservation law with partially linearly-degenerate flux

17:30∼17:45 Sungeun Jung (*Seoul National University*)
Fast-slow dynamics of planar particle models for flocking and swarming

17:45∼18:00 I-Kun Chen (*Academia Sinica*)
Boundary singularity for thermal transpiration problem of the linearized Boltzmann equation

Session (F), 20 (Tue), Hall 2

15:00∼15:15 Shingo Ito (*Tokyo University of Science*)
Wave front set defined by wave packet transform and its application

15:15∼15:30 Haruya Mizutani (*Kyoto University*)
Strichartz estimates for Schröedinger equations with variable coefficients and unbounded potentials

15:30∼15:45 Hiroaki Kikuchi (*Tokyo Denki University*)
Scattering and blowup problems for a class of nonlinear Schrödinger equations

15:45∼16:00 Chunhua Li (*Osaka University*)
Decay estimates of solutions for a system of nonlinear Schrödinger equations in 2D

16:15∼16:30 Masashi Aiki (*Keio University*)
Motion of a Vortex Filament with Axial Flow in the Half Space

16:30∼16:45 Takamori Kato (*Kyoto University*)
Well-posedness for the higher order KdV equation

16:45∼17:00 Mamoru Okamoto (*Kyoto University*)
Well-posedness of the Maxwell–Dirac system in 1+1 space time dimensions

17:00∼17:15 Makoto Narita (*Okinawa National College of Technology*)
On spherically symmetric gravitational collapse in the Einstein–Gauss–Bonnet theory

17:30~17:45 Hiroyuki Takamura (*Future University Hakodate*)
The final problem on the optimality of the general theory for nonlinear wave equations

17:45~18:00 Kyouhei Wakasa (*Future University Hakodate*)
Sharp blow-up for semilinear wave equations with non-compactly supported data

Session (G), 21 (Wed), Hall 1

13:30~13:45 Tsukasa Iwabuchi (*Tohoku University*)
Global and almost global solutions for some nonlinear parabolic equations in Besov spaces andTriebel–Lizorkin spaces

13:45~14:00 Ryo Takada (*Tohoku University*)
Propagation of real analyticity for the solution to the Euler equations in the Besov space

14:00~14:15 Yutaka Terasawa (*The University of Tokyo*)
On Haussdorff dimension of blow-up times relavant to weak solutions of generalized Navier–Stokes Fluids

Session (H), 21 (Wed), Hall 2

13:30~13:45 Masakazu Kato (*Muoran Institute of Technology*)
Sharp asymptotics for the damped wave equation with a nonlinear convection term

13:45~14:00 Jiayun Lin (*Zhejiang University*)
Critical exponent for the semilinear wave equation with time-dependent damping

14:00~14:15 Shuji Yoshikawa (*Ehime University*)
Asymptotic Profiles for the Falk–Konopka Elastic System with Weak Damping

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- Mathematical Society of Japan
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